



PATENT ABSTRACTS OF JAPAN

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LTD**(72) Inventor: **KAWAKAMI TAKASHI****(54) METHOD OF CHARGING BATTERY****(57) Abstract:**

PURPOSE: To prevent overcharging and permit efficient charging within a short period of time by a method wherein fuzzy inference is effected from the difference between the ambient temperature and the battery temperature and the increasing rate of a voltage to control the cutting rate of a switching circuit and infer the finishing time of charging.

CONSTITUTION: A/D conversion is effected by obtaining the temperature of a battery 1 to be charged by a sensor 5 and obtaining the ambient temperature by another sensor 7 to convert them into voltages through a converter 4. The battery 1 is charged by putting a DC current, obtained by rectifying AC from an AC wiring through a power supply circuit 2, ON/OFF by a switching circuit 6. The terminal voltage of the battery is also converted through an A/D converter 8. A control unit 3 effects the fuzzy inference of a charging current from the temperature of the battery 1, the ambient temperature and the voltage of the battery 1 upon starting charging to obtain the cutting rate of the switching circuit 6 and start charging. The fuzzy inferring is effected by the difference between the battery temperature and the ambient temperature and the increasing rate of the voltage of the battery to control the cutting rate of the switching circuit during charging. At the same time, the finishing time of the charging of the battery is inferred. According to this method, the overcharging of the battery can be prevented and quick charging can be effected efficiently.

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